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| APPLICATION NO.                                                                        | FILING DATE | FIRST NAMED INVENTOR  | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|----------------------------------------------------------------------------------------|-------------|-----------------------|---------------------|------------------|
| 10/069,611                                                                             | 09/18/2002  | Rainer-Walter Kastner | P/3240-67           | 3416             |
| 2352                                                                                   | 7590        | 04/28/2004            | EXAMINER            |                  |
| OSTROLENK FABER GERB & SOFFEN<br>1180 AVENUE OF THE AMERICAS<br>NEW YORK, NY 100368403 |             |                       | ANDREWS, MELVYN J   |                  |
|                                                                                        |             |                       | ART UNIT            | PAPER NUMBER     |
|                                                                                        |             |                       | 1742                |                  |

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |                                       |  |
|------------------------------|--------------------------------------|---------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/069,611 | <b>Applicant(s)</b><br>KASTNER ET AL. |  |
|                              | <b>Examiner</b><br>Melvyn J. Andrews | <b>Art Unit</b><br>1742               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |                                                                                                    |                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____                                                 |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>180902</u> .                                                              | 6) <input type="checkbox"/> Other: ____                                     |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: A Brief Description of the Drawing is absent. MPEP 608.01 (f).

Appropriate correction is required.

The abstract of the disclosure is objected to because it is not limited to a single paragraph. Correction is required. See MPEP § 608.01(b).

### ***Information Disclosure Statement***

The International Preliminary Examination Report has been noted but the Citations and Explanations is **not** legible after line 16 but the next page is legible. To facilitate the prosecution of this application a **legible** Explanation should be submitted

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 1 and 7, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding Claim 3, the phrase "in particular" is a preference which renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding Claim 7 the expression "which contains a fixed bed (7)" in combination with a fusion gasifier is indefinite because it has been held that one cannot have a patent for a combination of a device and the material upon which the device works. In re Hodler 1935 CD 69.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

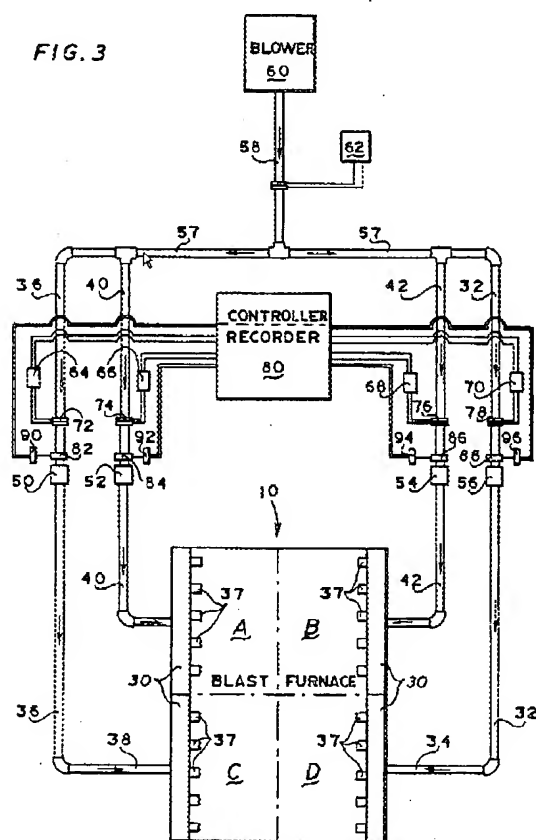
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Abstracts of Japan (JP-A-62 227 018). The English abstract describes a shaft reducing furnace (1) comprising a solid bed (2) made of solid carriers in which ore dust (6) is reduced by an oxygen-containing gas (5) blown into a furnace (1) through a plurality of nozzles (4) distributed about the circumference of the casing of the furnace (1). A bath of liquid metal (7) with slag layer (8) and a run-off (9) is formed under the solid bed (2). The formed reducing gas formed flows upwards. The pressure difference between **each** nozzle (4) and an upper set value is measured and the through-flow rate of the oxygen-containing gas and or the amount of ore dust blown into the furnace (1) are **regulated** according to the **measured** values obtained hence a stable operation is achieved but does not disclose the nozzles (4) distributed around the circumference of furnace (1) but Vuletic et al (US 4,891,062) discloses oxygen-containing gas blown-in through nozzles (6) into melt-down gasifier (4) with nozzles (6) being equally spaced around the perimeter of the melt-down gasifier (4) it would have been obvious to one of ordinary

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skill in the art at the time the invention was made to surround a furnace such as disclosed by the Abstracts of Japan as taught by Vuletic since fluidized beds are being maintained by control of the gas flow in both cases.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anthony (US Patent No.4,219,353). Anthony discloses an improved blast furnace for smelting lead ores the improvement comprises inclusion of a means for controlling the flow of air/oxygen to the tuyeres so that at all times there is an even distribution of air/oxygen to all areas to the furnace smelting zones as shown in Figure 3.



The lead blast furnace comprises flowmeters 64, 66, 68 and 70, control valves 82, 84, 86 and 88 and controller recorder 80 which are equivalent to the claimed fusion

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gasifier (1) characterized by a measuring device (18) , regulating device (21) as in Claim 7 and controlling device (19)( as in Claim 10), respectively but does not disclose iron-containing charge materials such as sponge iron but Anthony does disclose smelting ores such as lead in a blast furnace it would have been obvious to one of ordinary skill in the art that the Anthony blast furnace is the substantial structural equivalent to the claimed fusion gasifier even if Anthony does not smelt iron.

With respect to Claim 8 Anthony discloses bustle pipes 34, 36, 40 and 42 each with control valves which regulate the oxygen .

With respect to Claim 9 Anthony discloses adjustable valve means for regulating the flow of air which functions as a supply of nitrogen since air includes nitrogen.

With respect to Claim 10 Anthony discloses control valves 82, 84, 86, and 88 which are equivalent to the claimed regulating device (21).

#### ***Allowable Subject Matter***

The following is a statement of reasons for the indication of allowable subject matter: The Patent Abstracts of Japan (JP-A-62 227 018), the patent to Anthony (US 4,219,353) and Shin et al (US 6,228,142) which discloses an apparatus for keeping optimal penetration depth formed at the front end but do not disclose a method of operating a fusion-gasifier including resetting oxygen nozzles to a prescribed volume of mass flow as in Claim 2, the pressure of the oxygen-containing gas is increased or decreased as in Claim 3, oxygen-containing gas is throttled during tapping as in Claims 4 to 6.

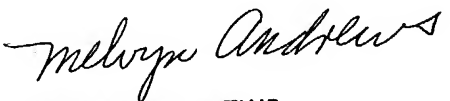
Claims 2 to 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvyn J. Andrews whose telephone number is (571)272-1239. The examiner can normally be reached on 8:00A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on (571)272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mja  
April 26, 2004

  
**MELVYN ANDREWS**  
**PRIMARY EXAMINER**